

ORAL MAGIC
FOLKLORE
and
TRADITION

By
B. R. TOWNEND, L.D.S.Lpool.

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B R Townend*

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ORAL MAGIC FOLKLORE *and* TRADITION

By

B. R. TOWNEND, L.D.S.Lpool.

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DENTISTRY is a very young science and we who practise it are sometimes inclined to forget that mankind throughout the ages has suffered from dental disease and has been more or less concerned about his teeth. This concern was probably more acute in olden times and among more primitive people, because to them loss of teeth indicated loss of virility, and loss of virility meant that the unfortunate man was pushed out of tribal affairs and in many cases exterminated.

To-day, when artificial substitutes are available for lost teeth, and our food, generally speaking, makes little demand upon our dentitions, we have lost much of this primitive concern and do not realise what a catastrophe the loss of teeth must have been to our forbears.

This primitive concern has been one of the factors in producing an amazing wealth of devices for ensuring that the teeth were well made in the first place, and secondly, if they became diseased, that

the grievous pain of toothache should be allayed and the tooth or teeth rendered serviceable. The extraction of a diseased tooth was, in the past, the last thing thought of, but we have vast numbers of recipes which have come down to us for the cure of toothache, the tightening of loose teeth and such like.

The wiring of loose teeth to firm ones, the distaste for extracting any but a loose tooth, are all significant of the fact that it was realised that the teeth were important organs. Abulcasis, or to give him his native name, Az-Zahraiwi, the great Arabian surgeon of the tenth century, says: "You should not extract a tooth in a hurry because it is a precious organ and has no substitute"; and similar sentiments are expressed by many Roman and mediæval writers. To-day, a Dental Letter and six pounds odd and the porcelain smile is an accomplished fact. We perhaps pay dearly for our progress!

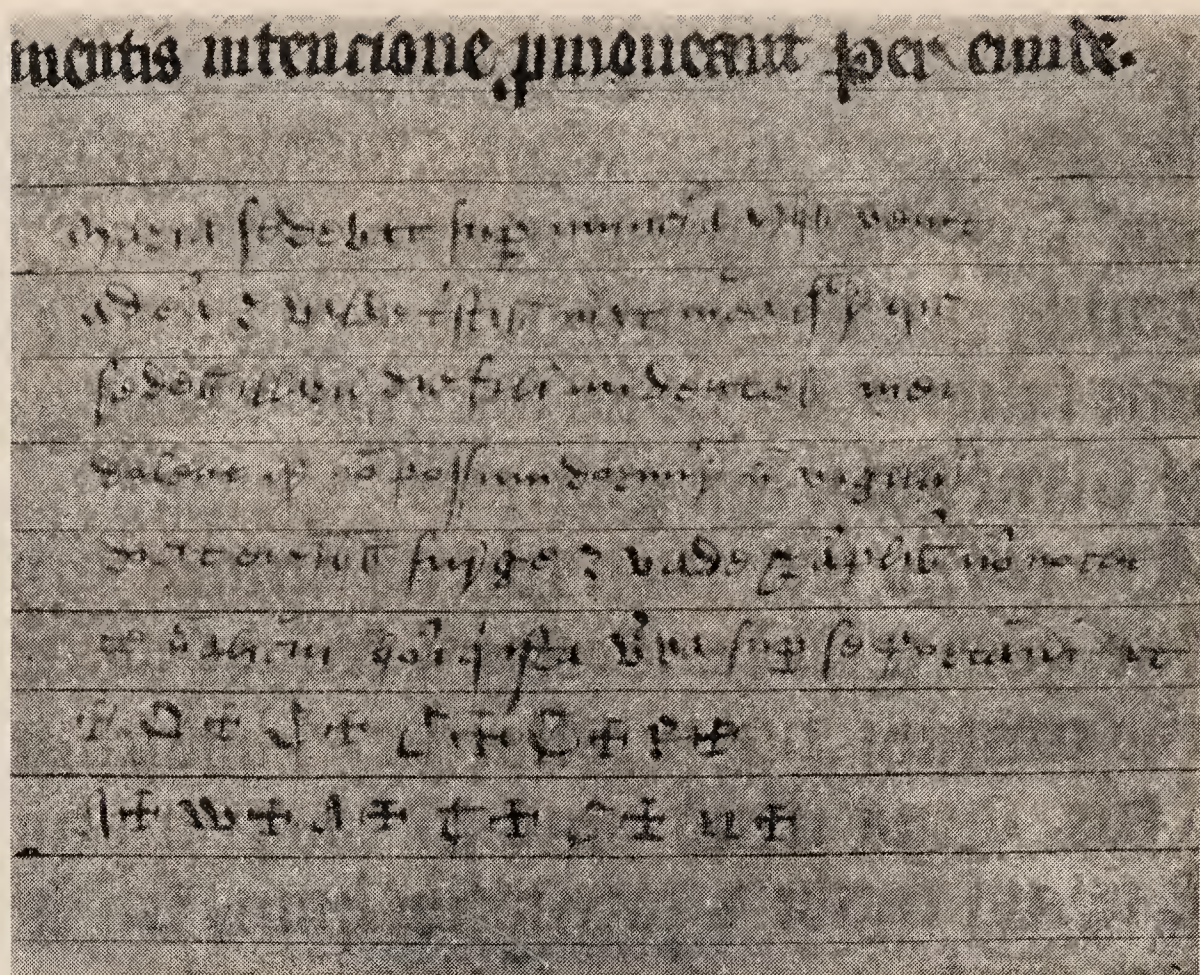
What were the ideas behind the minds of primitive people concerning disease? We cannot hope to understand the devices they used for its cure unless we endeavour to put ourselves into their mentality and realise their conception of what disease really was.

In the first place primitive man had little or no power of abstract thought: "and long ages had elapsed before he accumulated the concrete knowledge necessary to convince him that death is the inevitable fate of all living creatures" (Warren R. Dawson, "Magician and Leech," p.1). Similarly, disease having no visible or palpable cause was put down to the agency of supernatural influence.

As a result of this concept of the cause of disease, it followed that its cure was attempted by magical devices. There can be no doubt that magic was the parent of medicine and even to-day the blind faith of a great proportion of the general public in a bottle of medicine is an indication that this magical element has not yet lost its hold on the imagination of many people. Disease then was looked upon as an indication that the sufferer was possessed by an evil spirit.

There is a charm against toothache in the Assyrian Medical Texts which commences, "If a fiend has attacked the mouth of a man," and in another, toothache is attributed to the anger of a dead man whose funerary offerings have been neglected (Dr. R. Campbell Thompson. "Proceedings of the Royal Society of Medicine," Vol. XIX, p. 59, No. 4).

The most potent weapon possessed by the magician in his attack upon these possessing spirits was the incantation or charm, and we



By courtesy of the Very Reverend the Dean of Hereford.

A TOOTHACHE CHARM OF THE 12th CENTURY A.D.

THIS CHARM, found in an old manuscript in the Library of Hereford Cathedral, reads as follows :—

“ Mary was seated upon a stone, weeping. Jesus came to her and said : ‘ Oh my Mother who art so sorrowful, why dost thou sit here ? ’ She replied : ‘ My son, my teeth ache so badly I can neither sleep nor wake. ’ Jesus said : ‘ Arise and come. Neither thou nor any man shall suffer pain if these words are carried on you. ’ ”

✠ O ✠ E ✠ C ✠ G ✠ R ✠

A ✠ W ✠ A ✠ T ✠ C ✠ N ✠

(Translation by R. Wakefield, Dean of Hereford)

find in many of the Assyrian and Egyptian medical texts, first a spoken charm followed by the administration of some drug or series of drugs. To our minds many of these medicines appear to be just about as disgusting as it is possible to imagine, but when we remember that they were administered to drive out an evil spirit we realise that their nauseousness had a definite purpose.

Before we can appreciate the significance of many of these old toothache cures and devices for securing sound teeth which have sur-

vived from the past, and which are still in existence among races of low mentality to-day, we must first appreciate the basic fallacy upon which the vast fabric of magic and magical procedure was built.

Sir James Frazer ("The Golden Bough," abridged edition, p. 11) tells us that: "If we analyse the principles of thought on which magic is based, they will probably be found to resolve themselves into two; first that like produces like, or that an effect resembles its cause, and, second, that things which have once been in contact with each other continue to act on each other at a distance after the physical contact has been severed." Sir James calls the first principle the Law of Similarity, and the second the Law of Contact or Contagion.

Many examples of charms against toothache illustrating these two principles could be quoted. For instance, one very widespread idea is that if you put some object in a bag and hang it around the neck, as the object decays so will the toothache leave the sufferer. This is an example of the Law of Similarity or Homœopathic magic. I have heard on good authority of a Yorkshire girl who used such a charm, which consisted of a piece of raw meat put in a linen bag and hung around the neck.

The principle of contagious magic underlies the attempts made in many parts of the world to replace shed deciduous teeth by new and better ones. Thus it is a common practice to place such teeth where they will be found by a mouse or rat in the hope that through the sympathy existing between the tooth and its former owner, the new teeth will acquire the same strength and firmness as those of the rodent. This custom is carried out by the natives of Raratonga in the Pacific, and I have been told that in Galloway, children are told to put a shed baby tooth in a mouse's hole in the dyke so that the new teeth will be strong.

The principle of contagious magic is also exemplified in the numerous amulets consisting of animals' teeth. The characteristics of the animal whose tooth is used as an amulet are supposed to pass on to the wearer. Thus the courage of a lion or wolf will be transferred to the wearer of its tooth. The Arabs to-day will hang a hyena's tooth on the neck of their camels in the belief that added strength will result.

Another primitive idea which has given rise to numerous strange practices is that pain can be transferred from the body to another



By courtesy of the Wellcome Historical Medical Museum.

TOOTH AMULETS. These amulets (Sinn Ed-Dinn—Teeth of the Wolf) are worn in Palestine by children on their caps so that they may teethe quickly and be protected against evil spirits.

person or animal or to an inanimate body. The idea of nailing disease to a tree or wall is a very ancient one and Livy (VII, 3) tells us of a dreadful plague in Rome during the 5th Century B.C. which was brought to an end by a dictator who drove a nail into the wall of Jupiter's temple.

Nailing and pegging toothache is a very common custom among the Germanic nations, but it is also practised in the Balkans, and it has been reported in England. A popular interpretation associates the nails with those which hung Christ upon the Cross, but it is likely that the custom existed in pre-Christian days, as the story by Livy which has been quoted suggests. In many cases the gum is scratched with the nail until it bleeds.

In place of a nail a splinter of wood may be used or the pain transferred without a material vehicle, merely by the recitation of a charm or incantation. Thus in Friedrichshagen, near Berlin, a pear tree is touched by the sufferer, walked round three times, and the following incantation recited:

Pear tree, I complain to thee,
Three worms, they bother me.
The one is grey,
The other is blue,
The third is red,
I wish they were all three dead.

This little charm is interesting, first, because it introduces the worm theory of dental decay which has persisted from the times of ancient Egypt through the centuries, and, secondly, because it introduces the magic number three which enters into many magical practices. It is often associated in Christian countries with the Holy Trinity, but its use is much older than Christianity.

Not only can trees be used as the recipient of transferred pain, but also stones. In Swabia there is a peculiar custom in which the sufferer from toothache lifts a stone from the ground, spits three times upon that side which has been against the earth, and replaces the stone in the same position in which it has been before. This must be done when the patient is sure that nobody is watching him. This secrecy may be a relic of the idea which is extremely common and widespread among primitive peoples that if an enemy can obtain some portion of one's body, finger nails, hair, teeth, saliva, excrement, etc., by means of spells he can work harm on the original owner. This belief is obviously an example of contagious magic.

Pain can also be transferred direct to the ground. Thus in Thuringia a piece of sod is cut from the cemetery, the hole is blown into three times and the sod is replaced in the name of the Father, the Son and the Holy Ghost. In Brandenburg one chews peas and spits them out into a newly made grave.

Water can be the vehicle for transferred pain. In Swabia one goes before sunrise to a brook—you must not speak to anyone before going—then straddling the brook and bending backward one scoops a mouthful of water which is spit out, again backward.

An animal can be a recipient of the pain. The very simple method of spitting into a frog's mouth and telling it to make off with the toothache is a common method which was practised in many parts of this country in the past, and may still be practised to-day in country districts where these old traditional ideas linger.

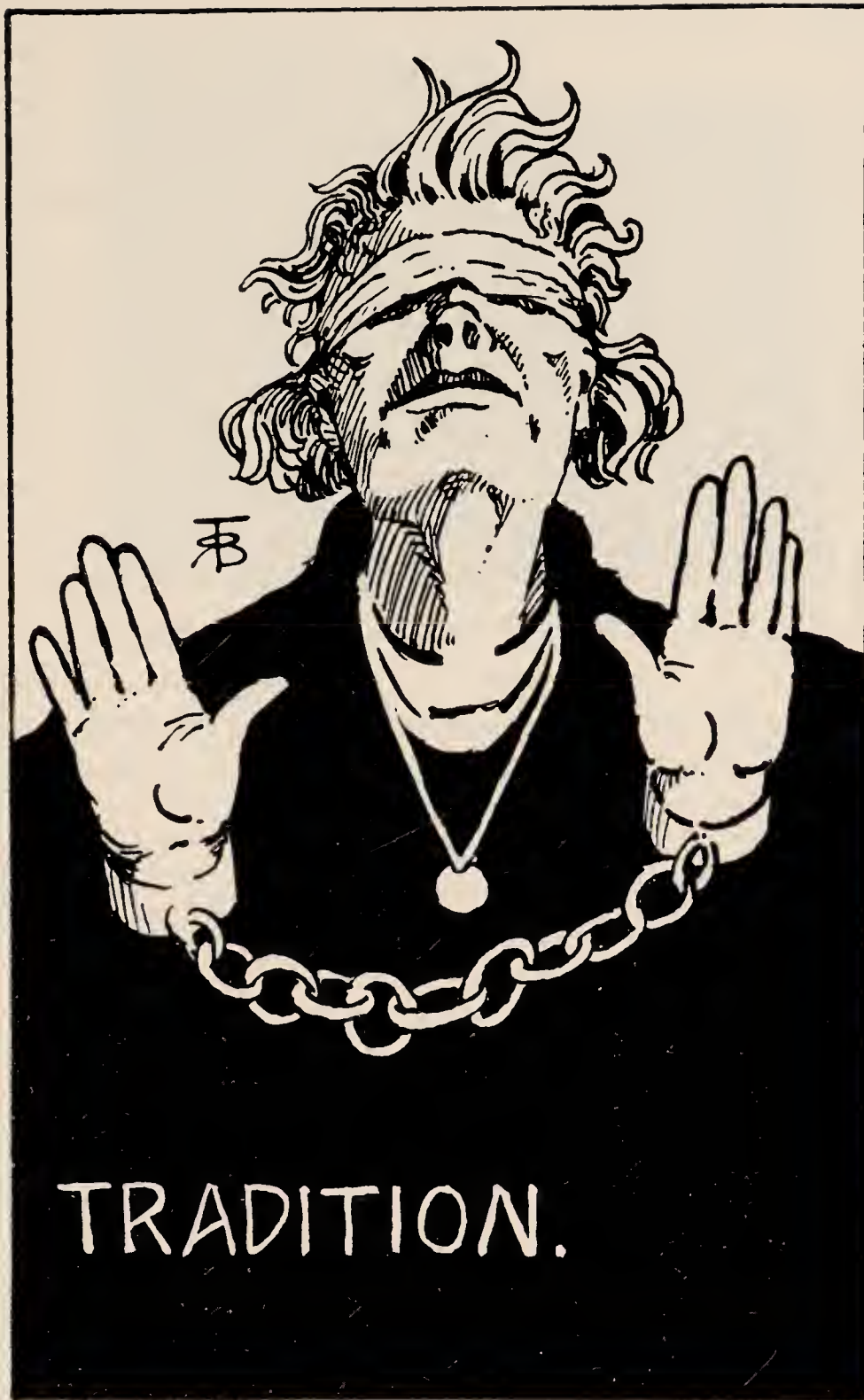
Finally, let us consider for a moment the subject of the charm which we postulated at the commencement of the paper as the primary method by which the primitive medicine man exorcised the

demons which annoyed his patients. The power of the spoken word is a potent principle in magic and all early systems of that art are greatly concerned with charms, incantations and words of power. The knowledge of the name of a demon is often sufficient to destroy his power, and the names of many gods were purposely withheld by the priests who served them so that they might not be misused. The strange words used by the mediæval astrologers and necromancers, such as Abracadabra and the like, were all "words of power" which were considered potent in calling up or exorcising spirits and gods.

Such being the power of the spoken or written word it is not in any way remarkable that this potency has been turned to the purpose of curing dental troubles. Perhaps the simplest and most naïve written charm against toothache is the one employed in Brunswick, where the people write on the outside of their door: "Toothache, stay away, I am not at home." To consider the subject of dental charms in any detail would require a paper in itself. Many of them are of a religious nature, many appeal to St. Apollonia, the Patroness of sufferers from toothache, and many are complete mysteries in their significance.

I have endeavoured in this paper, somewhat inadequately I fear, to indicate something of the texture underlying the attempts of the primitive mind to combat disease. Based as they are upon faulty premises, they have all failed. It is rather sad to think of the vast amount of effort and thought which must have been put into the building of this unstable edifice, this mirage which disappears in the light of pure science.

These false premises were based upon a mistaken association of ideas. The free association of ideas is an excellent thing, absolutely essential to the working of the human mind. Correctly and legitimately applied we have science as the result. Falsely applied we have magic, the bastard sister of science. Let us therefore regard with tolerance these old thinkers who missed the truth by so little. We may need that tolerance ourselves some day.



THE PERSISTENCE OF TRADITION

IT has been said by Warren R. Dawson in his extremely interesting book, "The Bridle of Pegasus," which deals with magic, mythology and folklore, that a survey of the medical texts concerning the therapeutic uses of drugs reveals "rather an obstinate conservatism than a progressive career." This state of affairs appears to be true not only in the realm of materia medica but in all scientific or pseudo-scientific studies.

To quote again from Dawson, we have a long story of "the slavish copying by one man from another, and by one race from another, the long reign of tradition and precedent that for centuries has been an effective bar to progressive thought." Ideas about the teeth and the treatment of dental disease have come under the influence of this innate characteristic of the human mind, and this paper is an attempt to put before the reader a few of these ideas which persisted through the centuries and have spread throughout the world.

Perhaps the most interesting and persistent of these ideas is the theory that dental disease is caused by a worm. I shall not treat this study in any great detail because it has been covered by abler hands than mine ("Worms in the Teeth," Lilian Lindsay, L.D.S.R.C.S.Edin., *British Dental Journal*, November 15th, 1929).

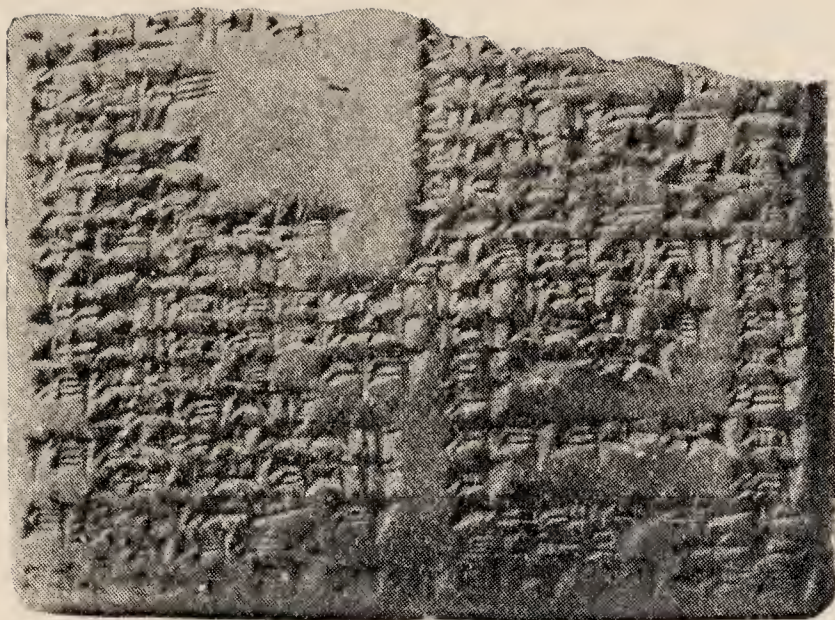
In brief, the idea seems to have had its birthplace in Egypt or Mesopotamia. It is mentioned in an Egyptian papyrus of the twentieth dynasty, which is approximately 1,200 years before Christ. We find it mentioned in the Assyrian medical texts and then again by the later Roman writers.

The belief spread through the Middle Ages and is to be found in medical and dental textbooks until the 18th Century. Anton Von Leeuwenhoek, the great Dutchman, carried out a series of experiments which he recounts in a letter written in 1700 to Sir Hans Sloane, which threw a doubt upon the worm theory. Pierre Fauchard, in 1728, cast further grave doubts upon the theory, though even that brilliant Frenchman considered that there might be cases where worms were possibly the agents of dental disease, though not the sole cause.

In the popular mind the idea still persists, and a colleague of mine some years ago was told by a parent that she could obtain something from the chemist which would "kill the maggot" in her child's tooth.

Not only has the worm theory passed along the stream of classical culture, but we find it in India, China, Central America, Madagascar and among the North American Indians. The widespread nature of the belief seems to indicate that it is very primitive and archaic.

It is equally remarkable that not only has the belief persisted but also one at least of the methods of curing the condition and killing the worm, namely, the use of henbane (hyoscyamus). This drug was used in Assyria (R. Campbell Thompson, "An Assyrian Chemist's Vade Mecum," *Journal of the Royal Asiatic Society*, October, 1934) and is still used by ignorant people to-day. It may



*Courtesy of the Trustees of
the British Museum.*

THE LEGEND OF THE WORM.

THIS CLAY TABLET from Nineveh has inscribed upon it in cuneiform characters, one of the earliest references we possess to the widespread and persistent idea that dental disease is caused by worms in the teeth and gums.

The tablet is shown in actual size.

be that it was the drug the aforementioned woman obtained from the chemist.

It would be tedious to transcribe all the various prescriptions containing henbane which have come down to us—a volume would be required—so I will quote but a few of the more interesting ones.

Scribonius Largus, Surgeon to the Emperor Claudius, whom he accompanied to Britain in A.D. 43, tells us in his “*Di Compositione Medicamentorum*”: “Suitable also are fumigations made of the seeds of hyoscyamus scattered on burning charcoal; these must be followed by rinsings of the mouth with hot water. In this, as it were, sometimes small worms are expelled.”

In the Syriac Book of Medicines, which was written early in the Christian Era and translated by Sir E. A. Wallis Budge, we find the hyoscyamus seed combined with leek seed and made into pills with fat. These pills are placed on the fire and the smoke from them is inhaled, “For teeth which throb and have worms in them.” An almost identical prescription is given in “*Leechdoms, Wort-cunning and Starcraft in Early England*” (Cockaigne): “For tooth worms take acorn meal and henbane seed and wax of all equally much,

minge these together, work into a wax candle and burn it till it reek in the mouth. Put a black cloth under it, then will the worms fall in it." This work dates back to the 10th Century.

In a leech book of the 15th Century, in the library of the Medical Society of London, we have: "Take henbane seed and leek seed and flour and lay these three things on a glowing tile stone that the breath (vapour) may come through to the tooth and it shall slay the worms and take away the ache." A similar recipe is given in a leech book of 1526-61, in the possession of Warren R. Dawson, with "powder of mintes" substituted for the flour. This cure will "kill the wormes and out away the ache."

Henbane is mentioned as a cure for toothache in a curious book written and published in 1650 by Robt. Pennel entitled "Physitian of Cranbrook in Kent." On the title page we are informed that the book is intended to be: "Help for the poor collected for the benefit of such as are not able to make use of Physitians and Chirugiens, or live remote from them."

To conclude our tracing of henbane through the ages, Dr. Wm. Barr, M.O.H., Rotherham, in a personal letter, tells me that one of his father's farm hands maintained that when he had toothache if hemp seed or henbane seed was put in a jug of steaming water and inhaled, then worms would be found which doubtless were the cause of the malady. Whether the use of henbane as a cure for toothache was based upon the anodyne effect of the drug or whether its efficacy depended upon faith alone it is difficult to say, but the fact remains that it has been used to our certain knowledge for nearly three thousand years.

A strange drug which, though not used entirely for the cure of dental diseases, has many dental associations is the flesh of a mouse, and here again we have a long history of the use of this rather disgusting remedy. Remains of undigested mice have been discovered in the alimentary canals of children buried in the sands of Egypt possibly 4,000 to 5,000 years before Christ. These bodies were naturally desiccated and are thus preserved intact, and the last meals were recovered by the late Professor G. Elliot Smith, examined and reported on by Dr. Fritz Netolitzky, of Czernowitz.

The custom of administering this somewhat bizarre medicine still continues both in Egypt and elsewhere. Dioscorides suggests the use of mice roasted to stop children dribbling at the mouth, and earlier still we have in the Berlin papyrus, which dates from about 1500 B.C., an incantation to drive away "sesmi" (some infantile malady



Courtesy of the Wellcome Historical Medical Museum.

TEETHING AMULETS.

PIECES OF ORRIS ROOT, shown in the picture above, are rubbed on the teeth of Jewish children in the Balkan States and Poland to facilitate teething. The same substance is used in this country for the same purpose, and has been so used since Roman times.

which might well be teething trouble) which ends with the words "Make this child or its mother eat a cooked mouse. Put the bones upon his neck with a string in which seven knots have been tied."

Pliny, in his Natural History, gives many examples of mouse therapy. For the cure of serpent stings, for alopecia, for ulceration of the head caused by cantharides, for earache, lung affections, gout, warts, and incontinence of urine, and he tells us that some of the magicians state that if a mouse is eaten twice a month it will protect from toothache (Bk. XXX, Cap. 8).

The custom of mouse-eating is still carried out in England, but I have not heard of its being associated with dental troubles. It is used as a cure for incontinence of urine in children, for whooping cough and chorea. In Yorkshire a mouse from the bottom of a coal pit which has never seen the light of day is looked upon as particularly efficacious.

In addition to the horrible custom of eating mice, there are many amulets consisting of parts of mice which are considered valuable as prophylactics against teething troubles. In Franconia they have a somewhat disgusting custom of biting off a live mouse's head, which

is wrapped in a linen bag and hung round the child's neck. Beware that you do not make a knot in the cord which binds up the bag. The subject of taboos on knots would form a paper in itself.

In Styria it must be the mother who bites off the head. In Speier the not very pleasant biting may be dispensed with if a gold instrument is used to cut off the head. In Mecklenburg a thread is passed through the eye of a mouse and tied round the throat while it is still soaked in blood, and in other places it is passed through both eyes and through the ears.

Mice or rats are associated with the teeth in many methods of the ritual disposal of shed teeth. In many places the shed tooth is thrown behind the stove where the mice live, or put into a mouse hole with the request that a better tooth be given in place of it. This custom is common on the Continent of Europe and is met with in this country, particularly in Scotland. It is also to be found in the Pacific Islands. So we see that mice have been associated with children's ailments and possibly with the teeth for something approaching six thousand years.

In conclusion, permit me to give a few examples of an idea which, although we have no records of its antiquity, yet the fact of its wide distribution would lead one to infer that its origin was archaic. I refer to the idea that any abnormality in the eruption of the first teeth is an indication that the child itself is not normal.

Let us first consider children who are born with teeth already erupted. An unusual fate is usually predicted for such. In Romanic countries such children are taken for future celebrities. Pliny remarks upon the favourableness of this omen. In the majority of cases, however, such eruption is looked upon as not only a menace to the child but to all with whom he or she may come into contact. Among the Slavonian and Ural-Altaic nations such children become sorcerers, witches or vampires. This belief was evidently common in this country in Elizabethan days, because Shakespeare describes Richard III as—

“ That dog, that had his teeth before his eyes,
To worry lambs and lap their gentle blood.”

In “ Henry,” Gloucester says of himself—

“ The midwife wondered, and the woman cried,
‘ Oh, Jesus, bless us he is born with teeth !’
And so I was; which plainly signified
That I should snarl and bite and play the dog.”

Among many African natives, for a baby to be born with teeth is considered very unlucky. The Ba-ila put such a child to death, the abnormal event being attributed to a fetish power. Among the Nandi, the Kusase, the Isala, the Timni or Temne, the Kipsiki and many other tribes the same drastic fate is meted out to the unfortunate baby. It is believed by these tribes that the destiny of such children would be to ruin their relatives if they were allowed to grow up.

Not only is the child dreaded who is born with teeth, but also one in which the normal eruption of the teeth—namely, the lower incisors before the upper—is reversed.

Among many African tribes the cutting of the first teeth is awaited with great anxiety. Among the Awalambas of Southern Rhodesia, if the upper teeth come first the people say “It is wrong to leave a child who has cut the upper teeth first. You must throw him away.” And in the past the child was thrown into a pool to be devoured by the crocodiles. It was thought that if such a child was allowed to live, as each deciduous tooth was shed a relative would die.

Among the Basabei of the Kenya—Uganda boundary, if the upper teeth of a boy came first it was said that the father would die; if a girl, the mother. In order to avert this calamity, “the parents and grandparents sat round while a goat was killed and offered to the god Oiki. The contents of the stomach were smeared over the parents and beer was blown or sprinkled all over the party, including the child. A medicine man then broke out the offending teeth and thus saved the life of the parents.” (Rev. J. Roscoe, “The Bagesu.”)

The A-Kamba believe that should a child who has cut the upper teeth before the lower look at a growing crop, the crop will never reach maturity.

The ill omen of children who present this abnormality is not by any means confined to Africa.

The Hindus say that a child whose upper teeth erupt first brings great danger to the mother’s brother, and the same belief is held by the Arabians of Zanzibar, and many examples come from central Europe. In Silesia there is a proverb which refers to the order of cutting teeth, which says, “Teething high, buried deep,” and in Bohemia it is said that a child which cuts its lower incisors first, digs its own grave, but if the upper first appear it will die soon.

The same or similar beliefs exist in this country, and I have

received information regarding it from several correspondents in " Notes and Queries " of its occurrence in the North-East Midlands, Shropshire and Durham. Dr. James B. Samson, the M.O.H. of Romford, tells me that in his district a child which cut its teeth " on the cross," that is lower central incisor on one side followed by the upper central incisor on the other, is considered likely to suffer from nervous diseases.

Space does not permit of any further extension of this study of the persistence and widespread nature of these strange ideas, but I trust that the examples I have given will indicate something of the underlying prejudices which clutter up the path of progress.

THE MAGICAL CARE OF CHILDREN'S TEETH

TEETHING, particularly the cutting of the first teeth, is and always has been something of a landmark in a child's development. This being the case, it is not astonishing that a great wealth of custom and folklore has gathered around this period of infant life.

I have discussed at some length in a previous paper the fear of primitive minds if some abnormality in the process of cutting the teeth takes place, either in time or order of eruption, and this is undoubtedly one factor which has driven people to endeavour by all manner

of means that the teeth should be cut in a normal manner.

Other factors are first the primitive importance of teeth which has lost much of its potency in these latter days and also the fact that the period of teething has always been looked upon, with good reason, as a critical period of the baby's life. It is probable that teething is not the prime cause in this crisis, but it always has been so in the popular fancy, and many disturbances, either real or imaginary, mental or physical, during the first two or three years of life still have the useful handle of "teething" to hang on to.

It has been asserted that from one-third to one-half of the infantile deaths in the eighteenth century were due to teething and that about 7 per cent. of similar deaths in London up to the middle of the



THE FIRST TOOTH.

A painting by Hantzsch Johann Gottlieb,
1794-1848, in the Leipzig Museum.

From Iconographia Odontologica.

nineteenth century were due to the same cause. Whether the reasoning behind these assertions is *post hoc* or *propter hoc* is outside the scope of this paper, which deals with popular beliefs rather than scientific enquiry.

It is an interesting thought that our modern scientific concern regarding pre-natal influence on the teeth has its counterpart—hardly scientific, it is true—from a folkloristic point of view. For instance, in Hesse, on her wedding day the bride and future mother takes three crumbs of the bread she eats, and these are put away and kept among the treasures of the new home. If in after years a child is born, she rubs its gums silently with the crumbs in the belief that its teeth will be cut painlessly. In Brandenburg it is believed that if a child eats of the bread partaken of by a chaste couple on their wedding day it will cut its teeth without complications.

There are many strange customs and taboos which a pregnant woman must observe if her offspring's teeth are to be sound and cut without mishap. Certain foods are not allowed. A pregnant woman of Fiji must not eat a certain fish lest her child's teeth may look like those of the fish. Much of the present-day prejudice against dental treatment during pregnancy may have its origin in some of these old ideas.

Although perhaps not quite germane to our subject, it may be of interest to mention the belief that the husband often suffers from toothache during his wife's pregnancy. "Married man's toothache" may be a relic of that widespread custom known as "couvade," in which the husband takes to his bed at his wife's confinement and behaves generally as though he were going through the rigours of the ordeal. I have personally had a patient—a fairly well-educated man—who was loath to have a tooth extracted when his wife was in this condition.

The teeth are not forgotten on the day the baby is born, and many customs are carried out on that day which have dental significance. In Prussia a relative, usually the father, will put his finger in the child's mouth and then into a bucket of water, saying "Pain to the ground, in the name of . . . etc." The Franconians take a small worm out of the bulbs of the hip plant and rub the child's gum with it until the worm dies. The child will never suffer from toothache. Washing out the mouth with holy water after baptism is another very common prophylaxis against toothache. Such water was so



*Courtesy of the Wellcome
Medical Historical Museum*

A TEETHING AMULET

A necklace of snail shells used in Jersey
to facilitate teething.

valued in the past for charms in parts of Cornwall that the fonts had to be kept under lock and key.

Many customs during lactation have dental fitness in view, and the time and method of weaning is studied in order to gain the same end. The last day of nursing is often arranged on a holy day, St. John's Day, Maundy Thursday, or the night of a full moon are common dates in parts of Germany. The place where the child is last given the breast is important. In German Switzerland this is done under a walnut tree. In Silesia the mother must sit with bare buttocks upon a stone when the church bells ring, and then her child's teeth will be as hard as stone!

There is almost no end to the methods of prophylaxis and treatment when teething actually commences, and among them we have one example of the persistence of traditional remedies throughout the centuries, and their diffusion among the nations. I refer to the use of an animal's brain to rub the gums with. Pliny recommends this remedy, and the old Saxon Leech book translated by Cockaigne contains the quaint advice that hare's brain, "sodden," be rubbed on the gums "in order that for children their teeth may wax without sore."

Some of the devices which have been used to ensure trouble-free teething are grotesque and bizarre

in the extreme. Here are a few quoted from Max Baldinger ("Aberglaube und Volksmedizin in der Zahnheilkunde" Schweizerische Archiv für Volkskunde, tom. 35). A child will have painful and difficult teething if it sees itself in a mirror before it is a month old. If washing is hung on the garden hedge the same trouble will follow. To avoid painful teething the child should be allowed to look into the bread oven or eat pastry which a mouse has nibbled. This latter is pure contagious magic: the mouse has good teeth and so anything it has touched will carry the virtue.

If the mother bites off the nails of the child during its first year it will teethe easily, or if the father puts his hat on the child silently. It is a help if the child is put upon a sweating horse or if the tail of a cat or live fish is drawn through its mouth or if a dog is allowed to lick the infant.

Among the natives of Africa, teething is looked upon with similar interest to that shown among the European nations. Among the Bahima, as an indication that the child has passed the earliest phase of its life when it cuts its first teeth, if a boy the father puts into its hands a tiny bow and arrows for a few moments; if a girl the mother does the same with a gourd which is used for churning.

Among the Busoga the child is not allowed to sit up until the first teeth appear. A Kitara father gives the child a cow at this time and the milk from the animal is reserved for the child's use. The custom of making a gift to a baby when the first tooth is cut is very widespread. We have seen an example of it in Africa and it is also common among Nordic races. In Nordic myth we hear that Freya, the god of rain and sunshine, was given Alfheim—a fairy palace—as a "tooth-gift" (Tannfé). In some cases a gift is made to the person who first finds the new tooth. It is said in Brunswick that "the one who finds the new tooth gets a new dress," but as Kanner drily remarks, the dress is not always given. A teething gift of somewhat doubtful value is recorded by Grimm to the effect that if the one who first sees the tooth gives the child a rough blow, the remaining teeth will erupt without difficulty. Among the Semitic races the teething gift is familiar. The Maronites of the Lebanon arrange a feast at which a special kind of pudding is cooked and distributed among relations and friends. If this is not done it is said that the teeth will grow irregularly.

It can be said that the coming of the first tooth is looked upon throughout the world as an important event indicating the passing of the first phase of childhood heralding the change from the

mother's milk to more adult food. This is indicated by the happy cry of the Fellah women of Palestine who hail the first tooth with : " His tooth has come through, hide the bread in the house ! "

Having surveyed a few of the customs dealing with the prophylaxis of teething let us consider the amazing ritual which is associated with the disposal of the shed deciduous tooth. Much of this ritual is probably due to the primitive idea that we discussed in the first paper of the series, namely, that anything which has once been in contact with a person continues to possess the power to influence the person even after the contact has been severed.

It can be readily seen that a man having a mind which believes implicitly in demoniac possession, witchcraft and sorcery will be very loath to leave odd bits of his anatomy such as hair, finger-nails, and teeth lying about where they might fall into the power of magicians or evil spirits who could work evil on the original owner. He therefore hid these objects or disposed of them in a ritual manner, the ritual being the charm which made the evil influence ineffective, or invoked beneficent powers with the idea of improving the quality of the succeeding teeth.

Frazer tells us in " The Golden Bough " of a Sussex maidservant of less than one hundred years ago, who affirmed that if a child's shed teeth were thrown where an animal could gnaw them, the new teeth would be like the teeth of the animal which had bitten the old one. In proof of this she said that one Simmons had a pig's tooth in his upper jaw which he always averred was caused by the carelessness of his mother, who threw its predecessor into the hog trough.

We have mentioned in a previous article the association of shed deciduous teeth with rodents, particularly rats and mice, in the hope that through the sympathy which continues to exist between them and the former owner, his other teeth may acquire the same hardness and firmness as the teeth of the rodent.

It should be noted that this is only a theory, and other explanations have been given. Mrs. Lindsay, in " The Sun, The Tooth-drawer and The Saint " (Proceedings of the Royal Society of Medicine, Vol. XXVI, pp. 1377-1388, Sect. of Odontology, p. 33) considers the association of mice with Apollo and the sun and fire worship. One of the appellations of Apollo was Smintheus, the Mouse God.

Leo Kanner in " The Tooth as a Folkloristic Symbol " (The Psychoanalytic Review, Vol. XV, No. 1, January, 1928) considers

that teeth are phallic symbols, and as mice have similar associations the relationship is explained. I mention this merely to indicate the wide range covered by a study of this kind and the difficulty of explaining or finding any underlying pattern beneath these primitive ideas and practices.

To return to our main theme, many races throw their shed teeth to the sun (this custom supports Mrs. Lindsay's theory). Clement Doke tells us that the children of the Awalamba of Northern Rhodesia take the first shed tooth and a piece of cinder, throw the tooth to the east and the cinder to the west saying, "Tooth come back in the way the sun comes back. Cinder go in the way the sun sets." A gift is necessary to satisfy the west and the cinder signifies the darkness which is a quality of the west. The Basebei have a similar custom, and the Arabs of Morocco say, after throwing their teeth to the sun: "Take the tooth of a donkey and give me the tooth of a gazelle." Or among some tribes the child shows the tooth to the sun and then buries it under a stone. This is usually done outside the village as it is thought that if a fowl ate the tooth a new one would not grow in its place. These and similar customs are also found in Algeria and Palestine.

Lastly, we have the custom which is still practised in this country of throwing the teeth into the fire, often with salt on them (salt is a strong medicine against sorcery). Frequently we find a spoken charm associated with this practice. In Northumberland the child says: "Fire, burn, burn the tooth and give me another one. Not a black one but a white one; not a curved one but a straight one." In Yorkshire the tooth must be burnt and the following rhyme repeated, otherwise the child will have to hunt for another tooth after death.

"Fire, fire, take a beean (bone)

An' send our Johnny a good teeath ageean (again)."

I have endeavoured to indicate the widespread interest which is shown by more primitive people in the fortunes of the deciduous dentition. We hear a great deal about the lack of tooth consciousness these days and of the need for education in this state of mind. Tooth consciousness is a new phrase but it does not represent a new thing. Study of the past and of primitive peoples tells us that it has existed in all ages and amongst all races, and we might do well to try and regain some of the old interest which mankind has shown in his dentition.

SOME STRANGE DENTAL BELIEFS AND REMEDIES



TWO TOOTHACHE
AMULETS.

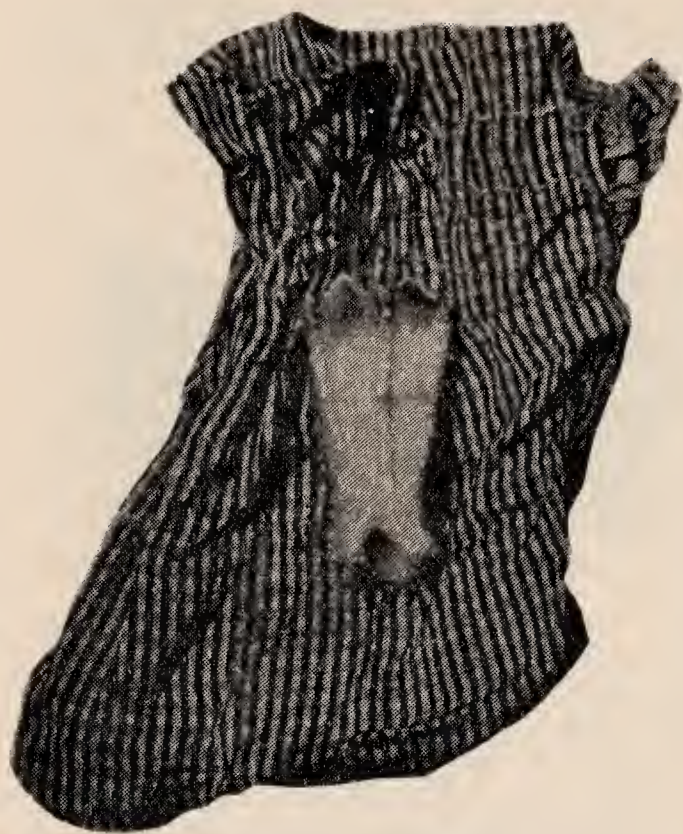
(Above) Two mole's feet, carried in the pocket for toothache in Norfolk. (Left) Bag containing a crust carried by an old man in South London for toothache.

*Photographs by courtesy of the Wellcome
Historical Medical Museum*

WE are told that truth is stranger than fiction, but some of the things which the world has regarded as truth in the past, and indeed to-day, are stronger than either truth or fiction. The teeth of man and animals have come in for their fair share of strange beliefs regarding their structure, eruption, number, etc. Many strange remedies have been devised in the effort to treat and cure toothache, and teeth have been used as amulets to cure other diseases. These beliefs form a very large part of folkloristic medicine.

The subject is a bewildering one and I shall not make any effort in this paper to indicate any pattern which may underlie many of these ideas. We have seen in a previous paper how magical principles underlie most of the early attempts to treat disease of any kind, and since these principles consist of associations of ideas gone, as it were, astray, it is understandable that however grotesque these ideas might be they were likely to be accepted by some, if not all, of the people to whose notice they were brought.

There is a strange association in Ancient Egyptian lore of onions and the teeth, which has been brought to my notice by Warren R. Dawson. The presentation of a bunch of onions formed part of the ritual of funerary offerings with scarcely any variation from



*Courtesy of the Wellcome
Historical Medical Museum*

A TOOTHACHE AMULET. A sheep's tooth in a striped silk bag used as an amulet against toothache in South Devon.

the Pyramid Age to the time of the Greeks. The formula which accompanies the offering is: "Oh! N. take to thyself the teeth of Horus, the onions by which thy mouth is hale." The association in the first place rose out of a pun, and puns are at the root of many things in Egypt. The word for "onion" puns on the word for "white." Onions and onion seed have come down the ages as a toothache cure, and the idea may have had its origin in this old association.

In Assyria we find numerous strange dental ideas and dental remedies. The worm theory of dental decay, which we have dealt with elsewhere, had its origin in Mesopotamia or in Egypt and has spread throughout the world and throughout the ages.

The Assyrian Medical Texts, which have been translated by Dr. R. Campbell Thompson, have some strange remedies. One for the treatment of the accident of a blow on the mouth consists of taking the right and left eyes of two species of fish, putting them in salt for four days, and then applying the right eye to the right side and the left eye to the left. The prescription continues: "With their eyes thou shalt take the asafoetida, liquid amber and fennel on the wool of a virgin ewe lamb and the hair of a virgin kid thou shalt thread; the wool of the ewe lamb and the hair of the kid thou shalt twist, put it on his neck and he shall recover."

The Assyrian dental Materia Medica included, among many other strange things, the dung of doves, cats and gazelles, sediment of the river, yeast of beer, pine and fir turpentine, the gall of a snake and the suet of a ram's kidney. To conclude the Assyrian section, one suggested cure for toothache is to lick the upper stone of a corn mill.

Much of the dental lore of the Greeks is sound as far as it goes, but superstition and errors were present, and since Greek medicine was to tincture the whole study of medicine until comparatively

modern times, these superstitions and errors were passed down as truths from age to age.

For instance, Aristotle informs us that men have more teeth than women, and this prejudice was accepted for centuries. We also have a prescription in the Hippocratic Collection which savours of magic. It is for the relief of a bad smelling breath in women, and consists of the burnt head of a hare and three mice, after having taken out the intestines of two of them (not, however, the liver and kidneys). This is mixed with powdered marble. This mixture is rubbed on to the teeth and gums, followed by friction with greasy wool.

After the Greeks came the Roman Empire, and here we find superstition and strange ideas running riot. One could write a book on the dental references in the thirty-seven books of Pliny's "Natural History" alone.

Pliny was a remarkable man. Born in the year A.D. 23 he flourished from the days of Nero to those of Vespasian, leading a busy public life and filling many important posts, including that of Governor of Spain under Nero and his successors. In the year A.D. 79 he was in charge of the Roman fleet at Misenum when the tremendous eruption of Vesuvius took place which destroyed Pompeii, Herculaneum and other neighbouring cities. Pliny—driven by his insatiable curiosity—went to Stabia to study the marvellous phenomenon and was there suffocated by the smoke and ashes from the volcano.

Pliny repeats the error of Aristotle that men have more teeth than women, and he says that women who have two canine teeth on the right side of the upper jaw have promise of being favourites of fortune, as was the case with Agrippina the mother of Domitian Nero; when the teeth are on the left side it is just the contrary. (Bk. VII, Cap. 15.)

In Bk. VIII, Cap. 4, he tells us that elephants, when they are surrounded by hunters, will place those in front which have the smallest teeth so that the enemy may think that the spoil is not worth the combat, and when they are weary of resistance they break off their tusks and offer them as ransom.

In Bk. VIII, Cap. 45, a mythical animal is described called a mantichora, which has no gums in either of its jaws, and its teeth are one continuous piece of bone.

In Bk. XXI, Cap. 83, Pliny says that the root of iris is very beneficial to infants cutting their teeth, when attached to the body.

Teething necklaces of iris root and other substances have been used through the ages and are still used to-day.

In describing the use of a drug called "laser," which may be asafoetida, Pliny deprecates the advice of Dioscorides to insert a pill of this substance covered with wax in a hollow tooth, being warned by the remarkable case of a man who, after doing this, threw himself from the top of a house. In Bk. XXVII, Cap. 62, we are told that according to Xenocrates, a worm grows in the head of *Gallidraga Dipsoeus pilosus*, and if it is attached with bread to the arm on the same side as the toothache, it is quite wonderful how the pain is removed.

In Bk. XXVIII, Cap. 2, Pliny's credulity cannot accept the saying of Apollonius that the most effectual remedy for toothache is to scarify the gums with the tooth of a man who has died a violent death.

In Cap. 9 of the same book it is said: "If a woman takes the first tooth that a child has shed, provided it has not touched the ground, and has it set in a bracelet and wears it constantly on her arm, it will preserve her from all pains in the uterus and adjoining parts." In relation to this idea, an advertisement appeared in a newspaper during the reign of Queen Anne:—

"Lost.—About two months ago, a ring with a tooth set in it. Whoever will bring it to Mr. Green, Goldsmith in the Minories, shall have the value of it."

In Cap. 2 we are advised to bite off a piece of wood which has been struck by lightning, the hands being held behind the back, and then apply it to the tooth as a sure cure for toothache, or to fumigate the tooth with the smoke from a burnt tooth of the opposite sex. Also any plant which has grown in a human skull, if chewed, will cause the teeth to come out.

Pliny describes as one of the frivolities of the magicians "the idea that if a lion's tooth from the right side is worn, the wearer will more readily win favour with kings and peoples" (Bk. XXVIII, Cap. 25). In Cap. 27 of the same book we read that to touch a diseased tooth with the tooth of a hyena will cure it; to wear one of the same animal's teeth attached to the body by a linen thread is a prophylactic against nightmares and dread of spectres, and in Cap. 28 it is stated that the teeth of a crocodile will, if worn, act as an aphrodisiac, but Pliny qualifies this by adding "if we chose to believe it."

We are told in Cap. 78 that hare's brain rubbed on the gums will facilitate dentition, and that a wolf's tooth hung on the body will prevent an infant from being startled. In Bk. XXXII, Cap. 14, we are informed that: "If a person rinses his teeth three times a year with the blood of a tortoise he will never have toothache."

Pliny is an almost inexhaustible storehouse for the folklorist, but we must leave him to pass down through the centuries, always remembering that his work had a great influence on the study of natural science for many years.

The works of Roman writers comprised the sole text-books of science during the dark ages, with the exception of the Arabian material which appears to have been taken direct from the Greek masters of medicine, but contemporaneously with the distinguished work of men like Avicenna and Abulcasis superstition was rife.

There is an interesting book which has been translated by Sir Wallis Budge known as "The Syriac Book of Medicines." Much of this work is sound common sense derived from the Greeks, but the scribe who copied it did not appear to have risen entirely above superstition, and adds a number of folk medicines in which teeth are involved. Here are two or three quoted without comment from Budge's translation:—

" TO PREVENT A MAN SNORING IN HIS SLEEP.

"Put the tooth of a stallion under the head of him that snoreth in his sleep and he will not snore." (p. 685, Vol. II.)

" CONCERNING THE MOLE.

"Take the upper teeth of a mole and tie them on the arm of a child who suffereth from 'shaking' (? chorea) and he will not shake." (p. 701, Vol. II.)

"Hang the tooth of a fox over a man who is suffering from toothache on the side of the face where the tooth acheth (and the pain will depart)." (p. 703, Vol. II.)

In Western Europe most of the material which has come down to us is based upon the works of the Latin writers. There is in the British Museum an interesting book of the tenth century which has been translated by the Rev. Oswald Cockaigne, M.A., and called "Leechdoms, Starcraft and Wort Cuning of Early England." Much of this follows the Latin writers, and consists of herbal remedies, but among them we find many instances of magic and superstition. We find the old remedy for teething cropping up again, the brain of

a hare rubbed on the gums “ in order that for children their teeth may wax without sore.” Bitches’ milk is used for the same purpose. Here is a recipe for toothache :—

“ Take raven’s dung and put it in the hollow tooth and colour it with pellitory of Spain that the sick recognise it not what it be; and then put it in the tooth and it shall break the tooth and take away the aching and as some men say it will make the tooth fall out.”

A volume would be needed to contain the strange ideas which have arisen regarding teeth. The compass of this article could not contain more than a moiety of them. I will conclude, therefore, with a few examples drawn from many sources and with no attempt to place them in geographical or chronological order.

From the “ Fairfax Recipe Book ” (17th Century) :—

“ To pull out a toothe : Take wormes when they be agendering together. Dry them upon a hott tyle stone. Then make powder of them and what toothe ye touche with it will fall out.”

From the “ Complete Housewife ” (18th Century) :—

“ To make necklaces for children cutting teeth : Take roots of henbane, orpin and vervain, scrape them with a sharp knife, cut them in long beads and string them green, first henbane, then orpin, then vervain and so do till ’tis the bigness of the child’s neck. Then take as much red wine as you think the necklace will suck up and put into it a dram of red coral, and as much pæony root finely powdered. Soak your beads twenty-eight hours in this and rub your powder on the beads.”

Here are a few country cures for toothache. In Essex we are told to put on stocking, shoe and trousers on the right leg first, or to drink out of a skull from a graveyard, or hang round the neck a tooth from a corpse. It will be remembered that Pliny mentions a similar remedy.

In Gloucester one is recommended to cut the finger-nails on Good Friday before sunrise, wrap up in writing paper and put in the pocket. In Lancashire an extracted tooth is thrown into the fire so that the owner will not have to look for it when he dies; the penalty for not burning the tooth is that the owner would have to look for it in a bucket of blood in hell. In Scotland, if a deciduous tooth is not burnt a “ buck ” (projecting) tooth will follow it.

There is no end to the story of medical folklore, but I must make an end to it here. The examples I have quoted represent but a fraction of what exist, but they will serve to show how concerned man has been about his teeth through the ages and throughout the world. I will conclude with the words of old Robert Pennel, who terminates his remarks concerning the teeth with the words:—

“ But the best remedy for a hollow tooth is to pull him out.”

THE TOOTHDRAWER



Rijksmuseum, Amsterdam.

THE TOOTHDRAWER.

This vivid picture was painted by Jan Victors about 1654.

ALTHOUGH man has suffered from dental disease since the very early periods of his appearance on the earth, it is a rather remarkable fact that there is little reference to be found in literature or little craniological evidence that what is to us the very obvious method of treating toothache, namely, extraction of the offending tooth, was carried out until comparatively recent times.

The state of the teeth of the many thousand Egyptian mummies which have been examined show in many cases evidence of gross dental disease, yet there appears to be no evidence of manipulative treatment of any kind in any Egyptian skulls of whatever rank, and there is no mention of tooth extraction in the medical texts. In spite of the well-known reference in Herodotus to dental specialists (Book

IX, Cap. 83) it would appear that if these specialists existed they did little beyond apply drugs and attempt to cure the conditions they found by magical procedures.

It is hard to believe that teeth were not removed, because the operation is not in normal cases a difficult one; in fact, it is practised by many primitive races, notably the Australian aborigines, as a ritual initiation ceremony.

There is also some evidence from which this practice may be deduced in the shape of missing teeth in skulls. Some of these teeth have obviously been lost ante mortem, and it would appear that they had been extracted, but I think we are safe in assuming that the operation was not carried out to any great extent or as a routine measure.

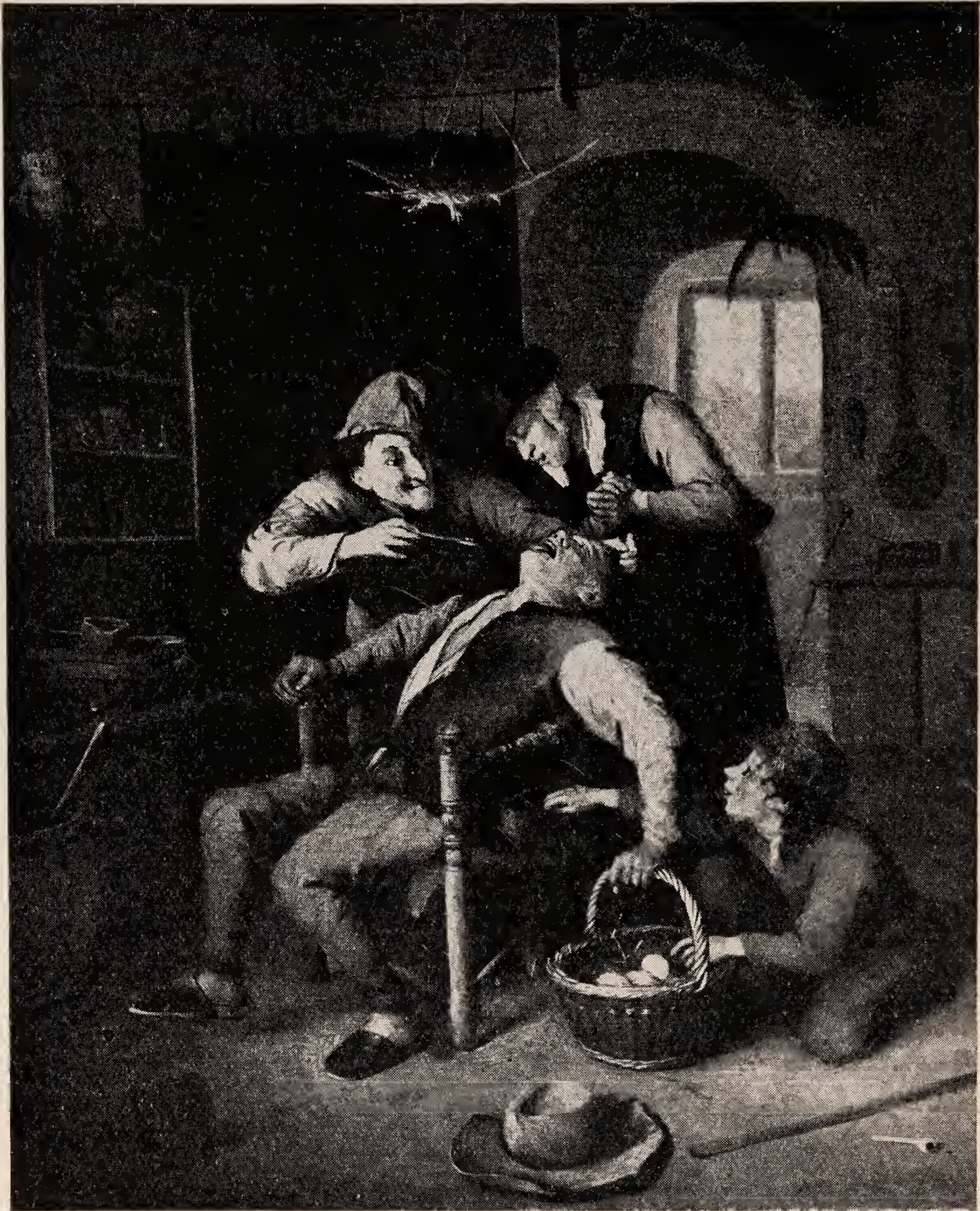
In Assyria there is, so far as my researches have led me, one piece of literary evidence that the operation of extraction was known. Among the vast collection of clay tablets which have been discovered at Kouyounjik (Nineveh), which tablets comprised the library of Assurbanipal, one of the Sargonid kings (722-609 B.C.), there are several letters from various of the Court physicians to the various kings. One of these contains the following passage: "The inflammation wherewith his head, his hands (arms), his feet (legs), are inflamed is due to his teeth. His teeth must be drawn; He will reduce (it?) accordingly (?). Then all will be well . . ."

The translation of this passage was made for me by Dr. R. Campbell Thompson, who is an authority on the Assyrian medical



*Courtesy of the Trustees
of the British Museum*

**A DENTAL OPERATION depicted
in a 15th century manuscript now
in the British Museum**



A TOOTHDRAWER about to demonstrate his skill, while a bright-eyed urchin takes advantage of the opportunity to rob the patient. A picture painted by Jan Steen (1626-1679)

texts, and it is remarkable for two reasons. It is the first literary reference we have to therapeutic extraction of the teeth, and also because of the inference which can be drawn from it that this old

doctor associated diseased teeth with a systemic disturbance. Such an inference is hard to believe yet the text is straightforward enough and there is little doubt that these Assyrian physicians, though not entirely free from magical practices showed "a sense of discrimination and a sincere effort to attribute certain ills to physical causes and a worthy attempt to find out their physical cures." (Royal Correspondence of the Assyrian Empire, Le Roy Thompson, Univ. of Michigan Studies, Part IV, pp. 35-36.)

It is likely that Egyptian and Assyrian medicine fathered Greek medicine, but the soil of Greek thought with its ability to produce abstract conceptions produced something very different from the largely magical medicine of the older civilisations.

Tooth extraction was one of the functions of the Greek physicians. We are told this by Hippocrates, Aristotle and Coelius Aurelianus. Cicero tells us that the third Æsculapius was the first discoverer of extracting teeth and purging bowels (De Natura Deorum III, 22) and Suetonius reports that Nero had a tooth extracted in Greece by a Greek physician in A.D. 67 (Suetonius, Vitæ Duodecem Cæsarum, Vesp. 5).

One would hardly call these old Greek physicians "tooth drawers" in any deprecatory sense. They were skilled physicians with high ideals as evidenced by the Hippocratic code, but during the latter days of the Roman Empire it is likely that quackery and charlatanism were rife in all branches of medicine. We have evidence of this in the works of Galen, who complains bitterly that cobblers, carpenters, dyers and smiths, unsuccessful in their own trade took up doctoring, and goes on to say that these ignorant fellows "know no more of ordinary culture than a donkey knows of playing on the lute." Martial compares the physician with the grave-digger in a way decidedly uncomplimentary to the former:—

"Diaulus held till recently
The office of physician,
But now in strict conformity
A grave-digger's commission."

Epigram I, 47.

The toothdrawer of the baser sort was evidently well established in Europe by the tenth century, because we find Abulcasis (Az Zahraiwi) the famous Arabian physician and surgeon writing about that period, or possibly a little later: "You know that many a quack coming to extract the aching tooth, finds that he has extracted



Courtesy of the Royal College of Surgeons

AN APOTHECARY'S SIGNBOARD. This 17th century signboard, believed to be unique, was found at Poole, Dorset, and now graces the entrance hall of the Royal College of Surgeons, London. A dental operation is represented in the bottom left-hand panel.

the sound one. I have seen this done frequently. While extracting, loosen and extract. Loosen it (the tooth) and you will extract it. Do not act like the ignorant cuppers and others.”

In the fourteenth century Guy de Chauliac, the great French

surgeon, states that operations on the teeth are appropriate to barbers and “*dentatores*” to whom the physician has abandoned them. This divorcement of medicine from surgery, whenever it commenced, was to continue until the nineteenth century.

We can thus divide the practitioners who have occupied themselves upon the teeth and mouth into four categories:—

(1) The doctor or physician who early abandoned the practice of dentistry. He was educated in the medical schools of antiquity, or in the universities of mediæval or later times. His was the academic training which kept alive through the Dark Ages the high traditions of the early Greek schools of medicine.

(2) The barber surgeon who was essentially a craftsman, serving an apprenticeship and gaining his knowledge in tonsorial and surgical practice. Ambroise Paré is an example, and a worthy example of this class. Skilful, intelligent, rich in device and of an enquiring turn of mind. Out of this class the surgeon developed with a different outlook upon life than his more academic brother the physician—a difference in outlook which I venture to suggest still survives.

(3) The peripatetic tooth puller—many of them worthy men.

(4) A very numerous class which developed from the last category, the quack of the market-place, the charlatan, the man to whom the term “tooth puller” and “tooth breaker” is applied somewhat contemptuously.

The first class of men had little or nothing to do with dentistry during the Middle Ages. The barber surgeon had less and less concern with dentistry as time went on, and before the revival of the scientific study of the teeth and their treatment which may be said to have been started by Pierre Fauchard in the eighteenth century, dentistry was in poor repute. There were, however, many good fellows practising. In the words of Guerini (*History of Dentistry*, p. 245) “. . . the sphere of action of the true dental specialists of those times (especially the best among them) was not all so limited as imagined by those who affirm that in past times dentists properly so called did not exist, but only tooth pullers. . . . when the barber’s art came down to a very low level, the dental art must have degenerated too, and have been represented for a certain time only by ignorant barbers and tooth-pullers.”

We have many literary pictures of those old toothdrawers and the

genre painters and engravers of the past have also left us a wealth of pictorial representations of them. William Langdon, in "The Vision of William concerning Piers the Ploughman," written during 1361-1393, describes the motley crew "of portours (porters) and pykeporses (pick-purses) and pylede (bald) toth-drawers" and other disreputable characters. A common pictorial rendering of the toothdrawer shows him engaged on his task while his assistant picks the pocket of his unfortunate patient.

Some of the advertisements published by these professional forbears of ours are interesting examples of self-praise, and, to continue the proverb, they have little recommendation, yet I suppose they brought considerable grist to the mill. Here is one from the *Post Boy*, of London, December, 1719:—

"The widow of the late Dr. Povey, operator for the teeth, now follows the same business; she cleans teeth and puts in Artificial ones so easy, neat and firm that they need not be removed for some years; and they may eat with them as with their former and cannot be distinguished from their natural ones; and (she) sells all his (her late husband's) Medicines, which she made up for him many years in his life-time . . . She hath a Cephalick which certainly cures the tooth-ach in a minute's time, beyond any person in England; and she stops hollow Teeth so that the pain will never return again."

Can any practitioner to-day better that? I wonder how she got away with one of those difficult edentulous lower dentures, and what excuse she made if it was *not* "so easy, neat and firm that they need not be removed for some years"?

What sort of a fellow was our toothdrawer then? If the contemporary pictures which have come down to us do not lie, we find him working away, perhaps in the market-place, with all the theatrical appurtenances of the quack. He has a necklace of teeth around his neck, similar grisly specimens are dangling from a sign-board on which his virtues are extolled, and probably he sports a monkey whose grimaces amuse the crowd. Whether this crowd is a convention of the artist I do not know, but one always has the feeling, when looking at these old pictures, that our tooth puller liked an audience. We see the brass bands of Sequah, the dwarfs and negro attendants, the bleeding bowls and other paraphernalia of his craft, and, if practising indoors, the stuffed crocodiles. A

colourful figure which has happily passed from the stage of medicine.

The kaleidoscope of our four classes of dental practitioner has turned through the centuries. The patterns have changed and there are signs that the sharp divisions which have existed will fuse into a coherent whole and we shall produce the dental surgeon of to-morrow, a man of high ideals and traditions who will play a great part in the cause of suffering humanity.

THE RISE AND DEVELOPMENT OF THE CULT OF ST. APOLLONIA



ST. APOLLONIA. One of two figures (the other is of St. Agnes) in a picture painted by an artist of the Portuguese School of the 16th Century, in the Wielkopolskie Museum, Posen, Poland.

ST. APOLLONIA was in the first place the patroness of people suffering from toothache. Her attributes as patroness of toothdrawers and dentists culminating in the use of her picture as the crest and bookplate of the British Dental Association was a later development of her cult.

The idea of placing parts of the body under the protection of a divine or saintly personage was not a product of Christianity but was taken over, like so many other Christian ideas, from pagan customs, and like so many other cultural concepts the origin of this custom appears to have been in ancient Egypt,

because in many Egyptian texts from the Old Kingdom to the time of the Ptolemies, we find lists of parts of the body both internal and external each of which is ascribed to the protection of a god or goddess.

The number of parts varies from seven in the Pyramid texts to thirty-four in the Berlin papyrus and there is no definite association between any one part of the body and any one particular deity. The order becomes canonical in Early Christian and mediæval times and in the medical and astrological books of that period we find the number stabilised at twelve, the twelve deities being the familiar signs of the Zodiac.

Aries is associated with the head, Taurus with the neck and shoulders, Gemini with the arms, Cancer with the breast, Leo with the back and sides, Virgo with the belly, Libra with the buttocks, Scorpio with the genital organs, Sagittarius with the thighs, Capricornus with the knees, Aquarius with the legs and Pisces with the feet.

In later times the places of the Zodiacal signs were usurped by the saints of the Christian calendar. St. Otilia took the place of Aries; St. Blazius that of Taurus; St. Lawrence those of Gemini, Cancer and Leo; St. Erasmus those of Libra and Scorpio; St. Bugarde that of Sagittarius; St. Roche that of Capricornus; St. Quirinus that of Aquarius; St. John took the place of Pisces. (Warren R. Dawson, *Notes on Egyptian Magic "Ægyptus,"* 1931.)

It was an easy transition to go on increasing almost indefinitely the saints who had special protective powers over special parts of the body and to St. Apollonia on account of the manner of her martyrdom was delegated the care of the teeth and of sufferers from toothache.

Among primitive people the idea that the soul and the body could be separated at death was a common one and accounts for the care that was bestowed upon the ritual disposal of the body and the provision of the wherewithal for the soul's journey to the underworld.

These ideas gradually underwent a change, and in Christian times the soul was conceived as leaving the body after death and ascending to celestial realms to dwell in communion with all others who had lived a holy life. These angels were akin to the good dæmons of classical times, and were supposed to act as helpers and protectors of humans, and to play the part of mediators between God and man.



THE MARTYRDOM of St. Apollonia.
Reproduced from a coloured woodcut of
1473 in the University Library, Basle.

This abstract idea was hardly sufficient to satisfy the minds of the masses, and as a result the tombs of saints became popular places of pilgrimages, their statues became holy things and relics of them took on a special sanctity and efficacy as tangible and visible intermediaries which could be invoked to help the sufferer.

The relics were particularly important, and any church which possessed such a thing was assured of revenues from pilgrims from all over the Christian world. It is to be feared that unscrupulous people deliberately forged many of these relics. In the case of St. Apollonia there are scattered throughout Europe many more teeth supposed to be hers than the normal thirty-two. Several mandibles are said to exist, in fact there are supposed to be two in Cologne!

Briefly, the story of St. Apollonia is as follows:—

In the year A.D. 248, the millenium of the Roman State was celebrated. Patriotic feeling ran high together with a wave of enthusiasm for the might of the old Roman gods, and as a result suspicions were aroused against the growing strength of the Christians, who shunned these old gods as if they were evil spirits.

The populace, incited by the priests, turned on the Christians. Their houses were broken into, their valuables stolen, and what could not be used was trodden in the dirt. Eusebius, the ecclesias-

tical historian says that the town of Alexandria looked as if an enemy had stormed it. Many of the Christians were seized and made to forswear their belief and turn again to the old gods. If they refused they were tormented and killed.

Among those sacrificed was Apollonia, a native of Alexandria and "a virgin stricken in years." She was imprisoned, her jaws broken and all her teeth knocked out. A stake was prepared on the outskirts of the city and death by fire was threatened unless she would recant her faith and sacrifice to the old gods. Apollonia chose voluntary immolation and sprang of her own accord into the fire, where she perished.

Her self-immolation aroused some murmurings against her claim to sanctity on the ground that she had taken her own life, but excuses were found and it was said that she had not acted upon her own impulse but as the result of a prompting from the Holy Ghost. This is the bare story of her martyrdom which was described by Dionysius, Bishop of Alexandria, to Fabius, Bishop of Antioch, and is found in Eusebius (*Ecclesiastical History*, Bk. IV., Cap. 34).

As the saint's popularity grew the story was added to and embroidered. The Carmelite General 1, Baptista Mantuanus describes her as the descendant of ancient kings: "excelling in beauty the nymphs of the Nile, brilliant through the fame of her progenitors, raised in purple, gold and fine raiment."

In another legend written



ST. APOLLONIA is depicted on many of the panelled rood screens of English churches. In this example — from the rood screen of Tor Bryan Church, Devon—dentistry's patron saint is the central figure.

in 1470 by Johann Bamler, of Augsburg, she is the daughter of the Emperor Eusebius and his wife Jatinia, living in luxury "with table, chair and household appointments all of red gold," but Apollonia cared little for this and of her plenty gave to the poor.

A Strasburg breviary of 1478 refers to her piety.

In a Utrecht breviary, it is said that when she was taken to a pagan temple she made the sign of the Cross and breathed upon the statues of the gods which fell down and broke in pieces.

In this breviary we have the first mention of Apollonia as the patroness of those who suffer from toothache. We are told that after her teeth had been struck out with sharp stones and she had been thrown into prison, she prayed that all sufferers from toothache might be relieved of their pain and thereupon there came a voice from Heaven saying, "O Bride of Christ, God has granted thy request."

Beside the Alexandrine legend of St. Apollonia there are to be found in old manuscripts similar stories of a maiden of the same name who met her martyrdom in Rome. These accounts put the date of her death some 114 years earlier, in the reign of Julian the Apostate, and her torture was ordered by the Emperor himself. First he had her beaten and stretched upon the rack, where her skin was stripped from her living body and pieces of flesh torn away. Finally her teeth were struck out and she was slain with a sword.

These and many other variants of history indicate to us that faith and phantasy have created an ideal which the faithful might worship and use as their mediator with God when they suffered from the pangs of toothache.

I have suggested that the abstract idea of a patroness in heaven interceding with the Almighty for the relief of pain was hardly sufficient for the common untutored mind, so out of this need grew the cult of Apollonia with its pilgrimages to shrines where her relics were to be found, the written and spoken charms and all the paraphernalia which appealed to simple people.

Contagious magic entered into the manufacture of relics. If dust, earth, wax or more especially pieces of cloth could be brought into contact with the genuine relics of the martyr, the supernatural power of the genuine relic entered into the new material and so a new relic was formed.

Pictures, statues or medallions of the saint possessed similar power and were worn or invoked for relief. The naming of the saint in a charm was a "word of power" and we have seen that this is an age-

old and widespread principle of the magical treatment of disease. Many of these set prayers are to be found in the old breviaries.

In the Utrecht breviary we have :—

“ Oh holy Apollonia, intercede for us by thy passion
By thy suffering in the teeth, throat and tongue,
That we may be delivered from pain in the teeth, now and
forever.
May we by thy favour be received into the realm of the
angels.”

In France the prayer takes the form of a conversation between Jesus and St. Apollonia :—

“ Saint Apolline, the Divine, seated beneath a tree on a cold
marble stone. Jesus our Saviour chanced to pass by.
‘ Apolline, why doest thou fret?’ ‘ Divine Master, I am
here because of pain not because I fret. I am here before
all for my blood and for the pain in my teeth.’ ‘ Apolline
thou hast faith. By thy grace thou shalt prevail. If it is
caused by pulsation it shall cease. If by a worm it shall
die.’ ”

A similar prayer comes from Spain :—

“ Apollonia stood at the gate of Heaven. The Virgin Mary
passed by, ‘ Say Apollonia what doest thou here, dost thou
sleep or watch?’ ‘ My Lady, I neither sleep nor watch.
I am dying of a pain in my teeth.’ ‘ By the bright Star
Venus and the setting Sun and the Holy Sacrament that
I bear in my womb you shall never suffer any more neither
in your molars nor in any other tooth.’ ”

Apollonia is very popular in Bavaria, where she is looked upon
as a special Bavarian Saint called “ Apollonia von Bayerland.”
A pathetically beautiful invocation is recorded from there :—

“ Saint Apollonia,
A poor sinner I stand here,
My teeth are very bad
Please be soon reconciled
And give me rest in my bones
That I forget the toothache soon.
Apollonia, Apollonia
Thou the holy saint in heaven,
See my pain in yourself,
Free me from evil pain,
For my toothache may torture me to death.

Apollonia of Bayerland,
I raise to thee my right hand,
And promise thee ten candles
If thou takest my toothache from me.”

Other observances than prayers such as fasting, gifts to the shrine, etc., are efficacious in the cure of toothache. In Bohemia and Styria anyone who fasts on her day—the ninth of February—will not suffer toothache for the rest of the year. In Bavaria the repetition of a paternoster in her name every day is regarded as a prophylactic against toothache. At Bonisdorf there is a chapel dedicated to Apollonia with a statue of the saint. If a person suffers from toothache he deposits at the foot of the statue the spoon with which he usually eats, and mothers whose children suffer from difficult teething bring their little shirts and dresses and hang them up there. It is said that the best spoons and dresses are usually stolen!

I have said that the dental profession have adopted the subject of our study as their patroness, and in a travel book written by Johann Keissler, published in 1751, a reference is made to the toothdrawers of Turin: “None are more modest than the toothdrawers, who unanimously assure one that they would pull the tooth ‘Con adjuto di Santa Apollonia,’ who, is the patron of the teeth.”

Finally, there are other saints who, in addition to their primary functions, are considered to protect sufferers from dental ills. Among them may be mentioned St. Valentine, St. Lawrence, St. Peter, St. Gertrude, St. Alma, St. Kummerius, St. Rosalie, St. Englemond, St. Crescence, St. Blaise, St. Dalmace, St. Rigobert, St. Dizie, St. Medard, St. Elizabeth of Hungary and St. Ida of Nivelles.

